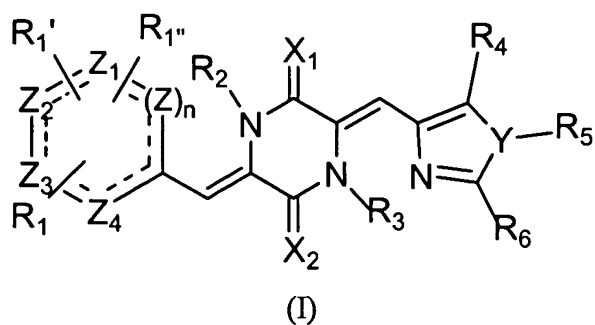


DEHYDROPHENYLAHISTINS AND ANALOGS THEREOF AND THE SYNTHESIS OF DEHYDROPHENYLAHISTINS AND ANALOGS THEREOF

Abstract of the Disclosure

Compounds represented by the following structure (I) are disclosed:



as are methods for making such compounds, wherein said methods comprise reacting a diacyldiketopiperazine with a first aldehyde to produce an intermediate compound; and reacting the intermediate compound with a second aldehyde to produce the class of compounds with the generic structure, where the first aldehyde and the second aldehydes are selected from the group consisting of an oxazolecarboxaldehyde, imidazolecarboxaldehyde, a benzaldehyde, imidazolecarboxaldehyde derivatives, and benzaldehyde derivatives, thereby forming the above compound wherein R_1 , R_1' , R_1'' , R_2 , R_3 , R_4 , R_5 , and R_6 , X_1 and X_2 , Y , Z , Z_1 , Z_2 , Z_3 , and Z_4 may each be separately defined in a manner consistent with the accompanying description. Compositions and methods for treating cancer and fungal infection are also disclosed.